

REMARKS

Claims 1-3, 9, 10, 12, 18, 19 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 6,023,720 (Aref et al., herein after "Aref"). Claims 1-20 stand rejected under 35 U.S.C. § 102(a) as being anticipated by "Memory Access Scheduling, 2000" (Rixner, (hereinafter "Rixner")).

No claims have been amended, canceled or added. Reconsideration of this application is respectfully requested.

The Office Action rejected claims 1-3, 9, 10, 12, 18 and 19 under 35 U.S.C. §102(b) as being anticipated by Aref. Claim 1 states:

1. A process for scheduling requests to access a resource, said requests originating from at least one thread from at least one initiator, said process comprising combining scheduling of requests between threads and scheduling of requests of initiator access to the resource and maintaining an issue order of at least one of, read and write, requests within each thread.

(Emphasis added)

The Examiner interpreted the existing claim language "maintaining the issue order of read and/or write requests within each thread" as being the same as a read/write request being inserted into the queue. The Examiner stated that "Aref teaches maintaining the issue order of the requests (5/50-55, 6/24-35). The read/write request is inserted into the queue, thus maintaining the order of issue/insertion." (Office Action page 2). However, Applicant respectfully asserts that claim 1 is not anticipated by Aref under 35 U.S.C. §102(b). Applicant also traverse the Examiner's interpretation

of the claim language because the Examiner appears to be ignoring terms stated in the claims. Claim 1 states "maintaining an issue order of at least one of, read and write, requests within each thread."

As stated in the previous response, Aref discloses a disk scheduling system that does not attempt to maintain issue order or read/write requests within a stream. In contrast, Aref discloses that the issue order of read/write requests are allowed to be reordered to satisfy disk scheduling efficiency requirements. Aref discloses:

Seek time is the most time-consuming part of disk retrieval. One purpose of disk scheduling algorithms is to reduce this seek time. This can be achieved by queuing and ordering the disk access requests so that seek time is minimized.

(Col. 4, lines 29-34) (emphasis added)

Aref is clearly stating that requests are queued and ordered to reduce seek time. Hence, Aref is disclosing a system in which the maintaining of issue order is sacrificed in order to reduce seek time. In fact, an additional mechanism called a Sequence Control Broker outside of the disk scheduling mechanism is forced take care of re-ordering the stream as needed to restore the original issue order. Aref discloses:

In order to retrieve the video in the correct order, a Sequence Control Broker (SCB) 14 stores an ordered list of pointers to all the MSF blocks of a video stream. The SCB 14 acts on behalf of users to maintain a video playback stream.

(Col. 3 Lns. 45-48) (emphasis added)

Aref does not disclose or suggest a process to schedule requests to access a resource and maintain an issue order of read and/or write requests within each thread. In contrast, Aref suggests a disk scheduling system to minimize seek time at the expense of having to reorder disk access requests with a Sequence Control Broker.

The Examiner specifically points to col. 5, lines 50-55 and col. 6, lines 24-35 in support of the contention that Aref maintains the issue order of requests. This language does not support the maintaining of issue order. The language specifically states:

Each read request is assigned a deadline by the read request deadline assigner and each write request is assigned a deadline by the write request deadline generator. These read and write requests are then inserted into a memory that is a subdivided data structure by the disk queue organizer with each partition corresponding to an optimal seek path.

(col. 5, lines 52-59) (emphasis added)

This further shows that requests are not maintained in their issue order, but inserted based on an optimal seek path. Therefore, Aref fails to disclose each and every limitation of claim 1. As such, Aref does not anticipate claim 1 under 35 U.S.C. §102(b).

Given that claims 2-3 depend from and include the limitations of claim 1, claims 2-3 are also not anticipated by Aref under 35 U.S.C. §102(b).

Applicant respectfully asserts Aref does not anticipate independent claim 10 under 35 U.S.C. §102(b). Claim 10 states, "maintaining an issued order of requests within each thread." As discussed above, Aref does not disclose or suggest a scheduling apparatus having logic to maintain the issue order of requests within each thread. In contrast, Aref discloses a scheduling system that minimizes seek times at the expense of maintain issue order of requests. Therefore, Aref does not disclose each and every limitation of claim 10. As such, Aref does not anticipate claim 10 under 35 U.S.C. §102(b).

Given that claim 12 depends from and includes the limitations of claim 10, Aref does also not anticipate claim 12 under 35 U.S.C. §102(b).

Applicant respectfully asserts Aref does not anticipate independent claim 18 under 35 U.S.C. §102(b). Claim 18 states, "maintaining an issue order of requests within each thread." As discussed above, Aref does not disclose or suggest a scheduling apparatus having logic to maintain the issue order of requests within each thread. In contrast, Aref discloses a scheduling system that minimizes seek times at the expense of maintain issue order of requests. Therefore, Aref does not disclose each and every limitation of claim 18. As such, Aref does not anticipate claim 18 under 35 U.S.C. §102(b).

Given that claim 19 depends from and include the limitations of claim 18, claim 19 is also not anticipated by Aref under 35 U.S.C. §102(b).

The Office Action rejected claims 1-20 under 35 U.S.C. §102(a) as being anticipated by "Memory Access Scheduling, 2000" (Rixner, (hereinafter "Rixner")). The Examiner did not address the arguments set forth by Applicant in the response filed 3/30/04 other than stating the argument was not persuasive in regards to Rixner. Examiner restated his identical arguments as to why he believes Rixner anticipates claims 1-20, while offering no explanation as to why applicant's previous response was unpersuasive. Accordingly, Rixner fails to disclose, "maintaining an issue order of requests within each thread."

Conclusion

It is respectfully submitted that in view of the amendments and remarks set forth herein, the rejections and objections have been overcome. Applicant reserves all rights with respect to the application of the doctrine equivalents. If there are any additional charges, please charge them to our Deposit Account No. 02-2666. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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Dated: _____

9-10-04



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